

AMENDMENTS TO THE TITLE

-- **FABRICATION COOLING APPARATUS FOR WAFER BAKING**

PLATE --

AMENDMENTS TO THE SPECIFICATION

On page 2, please amend the paragraph beginning on line 10 as follows:

However, conventional fabrication cooling apparatuses for the wafer baking plate
5 are slow in transferring heat and typically take a long time to achieve a uniform
temperature distribution for the wafer baking plate. Even if the baking plate is cooled
down rapidly, uniform temperature distribution takes a long time, thereby reducing wafer
product yield.

10 On page 2, please amend the paragraph beginning on line 18 as follows:

It is, therefore, an object of the present invention to provide a fabrication cooling
apparatus for a wafer baking plate, which shortens the time required to cool down the
wafer baking plate and rapidly stabilizes temperature distribution.

15 On page 2, please amend the paragraph beginning on line 22 as follows:

The above object is achieved by a fabrication cooling apparatus for a wafer
baking plate having a support plate for supporting a wafer, a heater under the support
plate, and a heat transfer plate interposed between the support plate and the heater, for
transferring heat. In the fabrication cooling apparatus, a hollow bore is formed in the heat
20 transfer plate of the wafer baking plate and partially filled with a liquid working fluid. A
cooling pipe is laid in the heat transfer plate, for circulating a cooling medium.

On page 4, please amend the paragraph beginning on line 13 as follows:

FIG. 1 is a perspective view of a wafer baking plate 100 according to a preferred
25 embodiment of the present invention, FIG. 2 is a cross-sectional view of the wafer
baking plate 100, taken along line A-A' illustrated in FIG. 1, FIG. 3 is a partial enlarged
cross-sectional view of the wafer backing plate 100, and FIG. 4 is a cross-sectional view
of the wafer baking plate 100, taken along line B-B' illustrated in FIG. 2. As illustrated
in FIGs. 1 to 4, the wafer baking plate 100 is comprised of a support plate 101, a heater
30 102 under the support plate 101, and a heat transfer plate 103 between the support plate

101 and the heater 102. The wafer baking plate 100 includes a fabrication cooling
apparatus having a cooling pipe 105 laid inside the heat transfer plate 103.

On page 7, please amend the paragraph beginning on line 7 as follows:

5 Referring to FIG. 12, it is noted from curves ① and ② that the average
temperature of the baking plate 100 drops to 100°C 15 seconds after the fabrication
cooling apparatus starts to operate in the present invention. Then the cooling water
injection is discontinued and the cooling pipe is filled with air. Thirty seconds later, the
temperature deviation of the baking plate 100 is reduced markedly, and 50 seconds later,
10 its temperature distribution is stabilized.

On page 7, please amend the paragraph beginning on line 14 as follows:

FIG. 13 shows a graph 209 illustrating temperature change in a wafer baking
plate according to conventional natural cooling method. While the natural cooling leads
15 to a relatively uniform temperature distribution on the wafer baking plate during cooling,
45 minutes is taken to cool the wafer baking plate from 150°C to 100°C, thereby
significantly decreasing product yield, as illustrated in FIG. 13. On the contrary, the
fabrication cooling apparatus of the present invention rapidly cools the baking plate,
achieving a uniform temperature distribution only in 50 seconds.
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On page 7, please amend the paragraph beginning on line 23 as follows:

In accordance with the present invention as described above, the fabrication
cooling apparatus for a wafer baking plate has a cooling pipe laid in a heat transfer plate
partially filled with a liquid working fluid, for rapid cooling of the wafer baking plate.
25 Since the heating and cooling of the baking plate is carried out via the working fluid, the
temperature is uniform across the baking plate.